## Amendments to the Claims:

2 This listing of claims will replace all prior versions, and listings of claims in the application:

## 3 Listing of Claims:

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- 4 1-31. (Canceled)
- 1 32. (Previously presented) A probe nucleic acid having the formula

- 3 wherein,
- 4 NA is a nucleic acid chain comprising nucleic acid monomers selected from the
- group consisting of natural nucleic acids, modified nucleic acids and
- 6 combinations thereof;
- R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are linker moieties independently selected from the group
- 8 consisting of substituted or unsubstituted alkyl and substituted or
- 9 unsubstituted heteroalkyl;
- Nu<sup>1</sup> and Nu<sup>2</sup> are members independently selected from the group consisting of
- 11 nucleotide residues and nucleoside residues;
- R is a molecular energy transfer donor;
- 14 X and Y are the same or different and are non-nucleic acid stabilizing moieties
- that interact to bring R and Q into operative proximity, thereby enabling
- transfer of energy from R to Q, wherein said probe nucleic acid sequence
- is not hybridized to a target nucleic acid.
- 1 33. (Currently amended) The <u>probe nucleic acid</u> <del>compound</del> according to
- 2 claim 32, wherein said molecular energy transfer donor is a fluorophore.

Q is a molecular energy acceptor; and

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1 34. (Currently amended) The probe nucleic acid compound according to 2 claim 32, wherein said molecular energy acceptor is a fluorescence quencher. 1 35. (Currently amended) The probe nucleic acid compound according to 2 claim 32, wherein X and Y are both hydrophobic moieties. 1 36. (Currently amended) The probe nucleic acid compound according to 2 claim 35, wherein X and Y are members independently selected from the group consisting of 3 saturated hydrocarbons, unsaturated hydrocarbons, steroids, fatty acids, fatty alcohols and 4 hydrophobic peptides. 1 37. (Currently amended) The probe nucleic acid compound according to 2 claim 32, wherein natural nucleic acids are members selected from the group consisting of deoxyribonucleotides, ribonucleotides and combinations thereof. 3 1 38. (Currently amended) The probe nucleic acid compound according to 2 claim 32, wherein said modified nucleic acids are peptide nucleic acids. 39. (Currently amended) The probe nucleic acid eompound according to 1 claim 32, wherein said nucleic acid monomers are joined by linkages that are members 2 3 independently selected from the group consisting of phosphodiesters and modified 4 phosphodiesters. 40. (Currently amended) The probe nucleic acid compound according to 1 2 claim 39, wherein said modified phosphodiesters are members selected from the group 3 consisting of phosphorothioates and phosphoramidates.

claim 32, wherein said nucleic acid chain further comprises a hybridization enhancing moiety.

(Currently amended) The probe nucleic acid compound according to

1	42. (Currently amended) The <u>probe nucleic acid</u> <del>compound</del> according to
2	claim 41, wherein said hybridization enhancing moiety is a member selected from the group
3	consisting of intercalating agents, minor groove binders and modified exocyclic bases.
1	43. (Canceled)
1	43. (Canceled)
1	44. (Previously Presented) The <u>probe nucleic acid</u> eompound according to
2	claim 32, wherein said compound is immobilized on a solid surface.
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1	45. (Currently amended) A method for amplifying a polynucleotide, wherein
2	a probe nucleic acid eompound according to claim 32 is a primer in said method, said method
3	comprising:
4	(a) hybridizing said primer to said polynucleotide; and
5	(b) amplifying said polynucleotide.
1	46. (Currently amended) The method according to claim 45, wherein said
2	amplifying is a member selected from the group consisting of polymerase chain reaction (PCR),
3	nucleic acid sequence based amplification (NASBA), strand displacement amplification (SDA)
4	and combinations thereof.
1	47. (Currently amended) A method for detecting or quantitating a nucleic
2	acid, wherein the probe nucleic acid eompound according to claim 32 is used as a probe, said
3	method comprising:
4	(a) hybridizing said compound to said nucleic acid; and
5	(b) detecting a change in fluorescence of said compound, thereby detecting or
6	quantitating said nucleic acid.
1	48. (Previously Presented) The method according to claim 47, wherein said
2	method comprises a member selected from the group consisting of 5'-nuclease assay, rolling
3	circle amplification and combinations thereof.
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- 1 49. (Currently amended) A kit for quantitating nucleic acid, said kit 2 comprising a <u>probe nucleic acid</u> <u>compound</u> according to claim 32.
- 1 50. (Currently amended) A probe nucleic acid eompound having the formula:

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4 wherein,

CHOL is a cholesterol derivative;

R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are linker moieties independently selected from the group consisting of substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl;

Nu<sup>1</sup> and Nu<sup>2</sup> are members independently selected from the group consisting of nucleotide residues and nucleoside residues;

NA is a nucleic acid sequence;

D is a donor of light energy; and

Q is a quencher of light energy,

wherein the CHOL moieties interact to bring D and Q into operative proximity, thereby enabling transfer of energy from D to Q, and

wherein said probe nucleic acid sequence is not hybridized to a target nucleic acid.

51. (Currently amended) The <u>probe nucleic acid</u> eompound according to claim 50, wherein R<sup>2</sup>-CHOL and R<sup>3</sup>-CHOL are independently selected and have structures according to the formula:

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5 wherein,

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- R<sup>11</sup> is a member selected from the group consisting of substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl;
- 8 PEG is polyethylene glycol;
- 9 Y<sup>3</sup> is an organic functional group adjoining said PEG to said CHOL.
- 1 52. (Currently amended) The <u>probe nucleic acid</u> <del>compound</del> according to claim 51, wherein said PEG has from about 2 to about 20 ethylene glycol subunits.
- 2 claim 51, wherein said PEG has from about 2 to about 20 ethylene glycol subunits.
- 1 53. (Currently amended) The <u>probe nucleic acid</u> compound according to claim 51 in which R<sup>11</sup> is substituted or unsubstituted alkyl.
- 1 54. (Currently amended) The <u>probe nucleic acid</u> <del>compound</del> according to claim 53, wherein R<sup>11</sup> is C<sub>1</sub>-C<sub>6</sub> substituted or unsubstituted alkyl.
- 1 55. (Currently amended) The <u>probe nucleic acid</u> compound according to 2 claim 51, wherein Y<sup>3</sup>-CHOL has the structure:

- 1 56. (Currently amended) The <u>probe nucleic acid</u> compound according to
  2 claim 50, wherein Nu<sup>1</sup> and Nu<sup>2</sup> are nucleotides having an exocyclic amine group to which -R<sup>1</sup>-D
  3 and -R<sup>4</sup>O are attached, respectively.
  - 57. (Currently amended) A probe nucleic acid compound having the formula:

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wherein,

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4	NA is a nucleic acid sequence;
5	Nu <sup>1</sup> and Nu <sup>2</sup> are members independently selected from the group consisting of
6	nucleotide residues and nucleoside residues;
7	Y <sup>1</sup> and Y <sup>2</sup> are linking groups independently selected from the group consisting of
8	substituted or unsubstituted alkyl and substituted or unsubstituted
9	heteroalkyl;
10	R <sup>5</sup> and R <sup>6</sup> are linking groups independently selected from the group consisting of
11	substituted or unsubstituted alkyl and substituted or unsubstituted
12	heteroalkyl;
13	D is a donor of light energy; and
14	Q is a quencher of light energy,
15	wherein each CHOL interacts with the other CHOL to bring D and Q into
16	operative proximity, thereby enabling transfer of energy from D to Q, and
17	wherein said probe nucleic acid sequence is not hybridized to a target nucleic
18	acid.
1	58. (Currently amended) The probe nucleic acid compound according to
2	claim 57, wherein Y <sup>1</sup> and Y <sup>2</sup> are members independently selected from substituted or
3	unsubstituted heteroalkyl.
1	59. (Currently amended) The probe nucleic acid compound according to
2	claim 58, wherein Y <sup>1</sup> and Y <sup>2</sup> are polyethylene glycol.
_	Chain De, Wilden T. Line D. Care Performs, 1982
	60. (Currently amended) The <u>probe nucleic acid</u> <del>compound</del> according to
	claim 59, wherein said polyethylene glycol has from about 2 to about 20 ethylene glycol
	subunits.
1	61. (Currently amended) The <u>probe nucleic acid</u> eompound according to
2	claim 57, wherein Y <sup>1</sup> -CHOL and Y <sup>2</sup> -CHOL have the structure:

**PATENT** 

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1 62. (Cancelled)